

### ABSTRACT

Oxygen-consuming zero gap chlor-alkali cell was configured to minimize peroxide formation. The cell included an ion-exchange membrane that divided the cell into an anode chamber including an anode and a cathode chamber including  
5 an oxygen gas diffusion cathode. The cathode included a single-piece of electrically conducting graphitized carbon cloth. Catalyst and polytetrafluoroethylene were attached to only one side of the cloth. When the cathode was positioned against the cation exchange membrane with the catalyst side away from the membrane, electrolysis of sodium chloride to chlorine and  
10 caustic (sodium hydroxide) proceeded with minimal peroxide formation.